ISO 15926: Integration of life-cycle data for oil and gas production facilities

Responses to issues raised during the New Work Item Proposal ballot

1 Introduction

Three comments were received from the P-members of ISO TC184/SC4 during the NWI ballot. This document presents the response of the POSC/CAESAR project to these comments. It is distributed for information and discussion at the Florence meeting of ISO TC184/SC4/WG3 T12 Offshore.

2 Comment from France

The French national body submitted the following comment against the NWI proposal:

> France (AFNOR) thinks that the scope of this NWI is too large and we do not understand why this new work item is proposed as an ISO standard (with an official ISO number) at the same level of STEP, PLIB or MANDATE. In fact, this NWI can be proposed as a part of STEP (such as an AP, for example) which would use the same resources, methodology and so on than the other SC 4 standards.

We identify two issues within this comment and respond to each as follows:

2.1 Scope of the Work Item

The scope of this work item has been determined by the interest of the oil companies and other industrial organizations involved in the POSC/CAESAR project. These organizations have established and validated business requirements for the long-term management of data associated with oil and gas production facilities such as offshore production platforms.

The technical solution that has been developed by POSC/CAESAR, and forms the basis for ISO 15926, allows for incremental implementation and deployment of the standard. Although the scope of the standard (as determined by business needs) is that of all data associated with all lifecycle phases for an oil and gas production facility, a particular implementation may focus on holding, integrating and managing a subset of this data. This approach has been validated in industrial implementations such as ETAP and VÅV.

2.2 Relationship to STEP Application Protocol architecture

The POSC/CAESAR project has proposed to standardize its results as a separate standard for several reasons. This rationale has been provided in the documentation accompanying the New Work Item Proposal. The major distinction between ISO 10303 Application Protocols and ISO 15926 is that:

- Application Protocols focus on *exchange* of data about *products*
- ISO 15926 focuses on *sharing* and *integration* of data about *assets*

The scope of ISO 15926 is therefore different from that of ISO 10303 Application Protocols. It has been found that requirements for asset life cycle data management either cannot be satisfied, can only partially be satisfied, or can only be satisfied using poor quality, ambiguous interpretations of the STEP resource models.

3 Comment from the UK

The UK national body submitted the following comment against the NWI proposal:

> Integration of life cycle data should NOT be restricted to Oil and Gas Production facilities.

Our response to this issue is as follows.

The "generic" data modelling approach taken by the POSC/CAESAR project is by intent neutral and has a "universal" context. This means that the data model (Part 2 of ISO 15926) is potentially suitable for use in sharing and integration of life cycle data by any discipline or industry. Nonetheless, the scope of current work on ISO 15926 will be restricted to oil and gas production facilities for two reasons.

- The resources committed to the project are focused on deliverables relevant to oil and gas production facilities requirements; an increase in scope without commitment of additional resources from other industries would inevitably cause delays in the development and publication of the approved Parts of ISO 15926.

- The industrial implementation projects that have validated the POSC/CAESAR specifications are in the oil and gas domain: whilst it can be stated as a matter of *principle* that these specifications are applicable elsewhere, this has not been demonstrated. Further, the reference data that specifies engineering semantics within the context of the generic data model exists only for oil and gas production facilities.

Notwithstanding this second point, it is recognized that other projects within SC4 (including ISO 10303-221 and the Engineering Analysis "Core ARM") share a common basis in the "EPISTLE" data modelling principles. This group of activities is complemented by current work in ISO TC184/SC4/WG10 towards the future architecture of all the SC4 standards.

4 Comment from the USA

The US national body submitted the following comment against the NWI proposal:

> The US position is based on the sense that this is a significant potential for redundancy between this NWI proposal and existing SC4 work. The NWI is considered to be premature and additional work is needed to define the relationship of this work with other SC4 activities. The US recommends including this effort in the scope of the PWI that is proposed in the second section of this ballot.

We identify three issues within this comment and respond to each separately.

4.1 Redundancy between the NWI and existing SC4 work

We refer to our response to the issue from the French national body (see 2.2 above).

4.2 Maturity of the NWI

The POSC/CAESAR specifications result from several years effort within the oil & gas industry. This has included both Requests For Technology from industry, and issue of “Snapshot” specifications for broad industry review. In addition (as noted above) these specifications have been implemented in several industry projects, the results of which are being used to validate and/or modify the content of the ISO 15926 standards.

4.3 Relationship to other SC4 standards

This is expected to be an outcome of the WG10 architecture review. ISO 15926 includes a conceptual model which can be considered as input to the architecture work.